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BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			KADING, JOSHUA A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/753,226	Applicant(s) ZWEIG ET AL. 	
	Examiner Joshua Kading	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6-24-04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12 and 14-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 14-21 is/are rejected.
- 7) ☐ Claim(s) 14 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

Claims 14 and 16 are objected to because of the following informalities:

Line 10 of claim 14 states "the cast frame". There is no antecedent basis for this limitation. Further, it is believed applicant intends "the cast frame" to refer back to the unicast frame mentioned. Therefore, it is suggested that "the cast frame" be changed to --the unicast frame--.

Claim 16 discloses "the Eavesdrop unicast frame includes at least four address fields, a first address field...and a fourth address field." However, independent claim 14 also discloses "the Eavesdrop unicast frame includes at least four address fields, a first address field...and a fourth address field." It is unclear if the Eavesdrop frame has multiple first and fourth address fields or if the address fields are the same as those disclosed in claim 14? It is assumed they are the same as those in claim 14 and as thus, claim 16 should be changed to --the Eavesdrop unicast frame includes the at least four address fields, the first address field...and the fourth address field.--

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 16, lines 3-4 recites the broad recitation "the fourth address field including a plurality of bits set to a predetermined value", and the claim also recites "a fourth address field including a medium access control (MAC) address" (from independent claim 14) which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hershey (U.S. Patent 5,481,535).

Regarding claim 1, Hershey discloses "a method comprising:
5 transmitting a cast frame for a destination device (figure 3A, element 33); and
receiving a data frame from the destination device in response to the destination
device receiving the cast frame for acknowledgement of receipt of the cast frame (figure
3A, element 41 where the next step in the method clearly indicates the receipt of
ACKs)."

10
Regarding claim 6, Hershey discloses "the destination device is a wireless unit
(figure 1A, any element mt is a wireless unit employing the method of figure 3A)."

Claim Rejections - 35 USC § 103

15 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

20 (a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 7, and 17-21 are rejected under 35 U.S.C. 103(a) as being
25 unpatentable over Hershey in view of IEEE 802.11 (Chapter 7, provided by applicant).

Regarding claim 5, Hershey discloses "a method comprising:

transmitting a cast frame for a destination device (figure 3A, element 33); and

receiving a data frame from the destination device in response to the destination device receiving the cast frame for acknowledgement of receipt of the cast frame (figure

5 3A, element 41 where the next step in the method clearly indicates the receipt of ACKs)."

However, Hershey lacks what IEEE 802.11 discloses "placing a second MAC address of a second address field of the cast frame into a first address field of a data frame (as in figure 3A, element 41 of Hershey, there are a plurality of ACK's sent in

10 response to the initial message, and IEEE 802.11, sections 7.1.3.3.4 and 7.1.3.3.5 disclose the functions of the different address fields of an 802.11 frame; thus, the ACK frame sent to the initial sending node from the initial destination node will use the address of the second address field (the initial source address) for the first address field (the new destination address) of the ACK frame)."

15 It would have been obvious to one with ordinary skill in the art to include the 802.11 standards for the cast frame for the purpose sending a packet to a plurality of destinations at once (IEEE, page 39, 7.1.3.3.2). The motivation being that sending the packet to a plurality of destinations all at once versus one destination at a time saves resources and time.

20

Regarding claim 17, Hershey discloses "a wireless network system comprising:

a plurality of wireless units (figure 1A, elements mt);

a fixed backbone network (figure 1A, where elements bt connect to a backbone network that carries the communications of the mt's); and

an access point in communication with both the fixed backbone network and the plurality of wireless units, the access point to transmit a cast frame for one of the
5 plurality of wireless units (figure 3A, element 33) and...receive a data frame from the one of the plurality of wireless units in response to the one of the plurality of wireless units receiving the cast frame for acknowledgement of receipt of the cast frame (figure 1A, elements bt are the access points, where it is known in the art that the bt's send and receive all data from the mt's in its coverage area and from the backbone network to
10 which it is connected)..."

However, Hershey lacks what IEEE 802.11 discloses "the cast frame comprises a first address field including a first medium access control address assigned to a group of wireless units (page 39, section 7.1.3.3.4 where a first address field indicates the group of wireless units of Hershey through the group address) and a second address
15 field including a second MAC address associated with a device transmitting the cast frame (page 39, section 7.1.3.3.5)" and "an address field of the data frame including the second MAC address of the second address field of the cast frame (page 39, section 7.1.3.3.5 where one of ordinary skill in the art would recognize that an ACK frame in accordance with 802.11 will have the required address fields, this includes the
20 destination field, which was once the source address of the received packet)."

It would have been obvious to one with ordinary skill in the art to include the 802.11 standards for the cast frame for the purpose sending a packet to a plurality of

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destinations at once (IEEE, page 39, 7.1.3.3.2). The motivation being that sending the packet to a plurality of destinations all at once versus one destination at a time saves resources and time.

5 Regarding claims 2 and 18, Hershey discloses the method of claim 1 and the system of claim 17. However, Hershey lacks what IEEE 802.11 discloses "the cast frame is a multicast frame assembled in accordance with Institute of Electrical and Electronics Engineers (IEEE) 802.11 (page 39, section 7.1.3.3.2, part B)." It would have been obvious to one with ordinary skill in the art to include the multicast frame for the
10 purpose sending a packet to a plurality of destinations at once (IEEE, page 39, 7.1.3.3.2). The motivation being that sending the packet to a plurality of destinations all at once versus one destination at a time saves resources and time.

 Regarding claims 3 and 19, Hershey discloses the method of claim 1 and the
15 system of claim 17. However, Hershey lacks what IEEE 802.11 discloses "the cast frame is a broadcast frame assembled in accordance with Institute of Electrical and Electronics Engineers (IEEE) 802.11 (page 39, section 7.1.3.3.2, part B)." It would have been obvious to one with ordinary skill in the art to include broadcast frame for the purpose sending a packet to a plurality of destinations at once (IEEE, page 39,
20 7.1.3.3.2). The motivation being that sending the packet to a plurality of destinations all at once versus one destination at a time saves resources and time.

Regarding claims 4 and 21, Hershey discloses the methods of claims 1 and 5. Hershey lacks what IEEE 802.11 discloses "the cast frame comprises a first address field including a first medium access control (MAC) address assigned to a group of wireless units (page 39, section 7.1.3.3.4 where a first address field indicates the group of wireless units of Hershey through the group address) and a second address field including a second MAC address associated with a device transmitting the cast frame (page 39, section 7.1.3.3.5)."

It would have been obvious to one with ordinary skill in the art to include the 802.11 standards for the cast frame for the purpose sending a packet to a plurality of destinations at once (IEEE, page 39, 7.1.3.3.2). The motivation being that sending the packet to a plurality of destinations all at once versus one destination at a time saves resources and time.

Regarding claim 7, Hershey discloses the method of claim 1. Hershey lacks what IEEE 802.11 discloses "the cast frame comprises a first address field including a plurality of bits set to a predetermined value and a second address field including a MAC address associated with a device transmitting the cast frame (page 34, section 7.1.1, figure 12 shows a MAC frame format with several address fields where two of the address fields take on the values of destination address for the cast frame and that of source address for that of the transmitting device, this can be seen in figure 23 on page 45)." It would have been obvious to one with ordinary skill in the art to include the 802.11 standards for the cast frame for the purpose sending a packet to a plurality of

destinations at once (IEEE, page 39, 7.1.3.3.2). The motivation being that sending the packet to a plurality of destinations all at once versus one destination at a time saves resources and time.

5 Regarding claim 20, Hershey discloses "...transmit a cast frame for a destination device (figure 3A, element 33)...detect receipt of a data frame from the destination device to acknowledge receipt of the cast frame (figure 3A, element 41 where the next step in the method clearly indicates the receipt of ACKs)..."

 However, Hershey lacks what IEEE 802.11 discloses "the cast frame comprises
10 a first address field including a first medium access control (MAC) address assigned to a group of wireless units (page 39, section 7.1.3.3.4 where a first address field indicates the group of wireless units of Hershey through the group address) and a second address field including a second MAC address associated with a device transmitting the cast frame (page 39, section 7.1.3.3.5)" and "an address field of the data frame
15 including the second MAC address of the second address field of the cast frame (page 39, section 7.1.3.3.5 where one of ordinary skill in the art would recognize that an ACK frame in accordance with 802.11 will have the required address fields, this includes the destination field, which was once the source address of the received packet)."

 It would have been obvious to one with ordinary skill in the art to include the
20 802.11 standards for the cast frame for the purpose sending a packet to a plurality of destinations at once (IEEE, page 39, 7.1.3.3.2). The motivation being that sending the

packet to a plurality of destinations all at once versus one destination at a time saves resources and time.

However, Hershey and IEEE 802.11 further lack the transmitting and detecting is done through the use of a computer program. Although neither Hershey nor IEEE 802.11 do not disclose the use of a computer program to facilitate the transmitting and detecting of the messages, it would have been obvious to one with ordinary skill in the art at the time of invention to have the transmitting and detecting of messages done with computer programs because the only way to effectively and efficiently communicate using electrical signals (including wireless) is through the use of computer programs.

10

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hershey in view of Wilford et al. (U.S. Patent 6,687,247 B1).

Regarding claim 8, Hershey discloses "a method comprising: determining that a cast frame is scheduled for transmission (figure 3A, element 29 where acquiring data and the ID of the destination signifies the packet ready for transmission);

15

transmitting each of the plurality of unicast frames to a corresponding plurality of destination devices (figure 3A, element 33); and

receiving an acknowledge frame from each of the plurality of destination devices in response to receiving one of the plurality of unicast frames (figure 3A, element 41; col. 6, lines 6-14)."

20

However, Hershey lacks what Wilford discloses, "translating the cast frame into a plurality of unicast frames (col. 10, lines 32-34)."

It would have been obvious to one with ordinary skill in the art at the time of invention to include the duplicating of the cast frame into unicast frames for the purpose of sending the data to all the users without having to store duplicate copies of the data for each user in a memory (Wilford, col. 45, lines 55-col. 46, lines 1-3). The motivation
5 for not storing a duplicate piece of data for each user is to save on resources.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hershey and Wilford et al. as applied to claim 8 above, and further in view of IEEE
802.11.

10

Regarding claim 9, Hershey and Wilford disclose the method of claim 8. However, Hershey lacks what IEEE 802.11 discloses "the cast frame is a multicast frame assembled in accordance with Institute of Electrical and Electronics Engineers (IEEE) 802.11 (page 39, section 7.1.3.3.2, part B)." It would have been obvious to one
15 with ordinary skill in the art to include the multicast frame for the purpose sending a packet to a plurality of destinations at once (IEEE, page 39, 7.1.3.3.2). The motivation being that sending the packet to a plurality of destinations all at once versus one destination at a time saves resources and time.

20

Regarding claim 10, Hershey discloses the method of claim 8. However, Hershey lacks what IEEE 802.11 discloses "the cast frame is a broadcast frame assembled in accordance with Institute of Electrical and Electronics Engineers (IEEE) 802.11 (page

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39, section 7.1.3.3.2, part B)." It would have been obvious to one with ordinary skill in the art to include broadcast frame for the purpose sending a packet to a plurality of destinations at once (IEEE, page 39, 7.1.3.3.2). The motivation being that sending the packet to a plurality of destinations all at once versus one destination at a time saves
5 resources and time.

Claims 12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hershey in view of IEEE 802.11 and in further view of Tanabe et al. (U.S. Patent 5,754,947).

10

Regarding claim 14, Hershey discloses "a method comprising: transmitting an Eavesdrop Unicast frame to a destination address (figure 3A, element 33)...receiving a data frame from the destination device in response to the destination device receiving the Eavesdrop Unicast frame for acknowledgement of receipt of the unicast frame
15 (figure 3A, element 41 where the next step in the method clearly indicates the receipt of ACKs)..."

However, Hershey lacks what IEEE 802.11 discloses "the Eavesdrop Unicast frame includes at least four address fields, a first address field including a destination address of the destination device and a fourth address field including a medium access
20 control (MAC) address assigned to a plurality of devices including the destination device (page 44, figure 22 shows the structure of a data frame which is the same as applicant's Eavesdrop Unicast packet shown in figure 8 of the specification)." It would have been

obvious to include the structure of the Eavesdrop Unicast packet so as to conform to the IEEE 802.11 protocol. The motivation for conforming to the protocol is so that there is a standard of communication that allows many users to communicate.

However, Hershey and IEEE 802.11 further lack what Tanabe discloses, "the contents of the first address field of the data frame having been overwritten with contents from the fourth address field of the Eavesdrop Unicast frame (col. 16, lines 7-14 where this is saying that the ACK frame is sent to the initial source, and the source address of the received frame is what is used as the destination address of the ACK frame)."

It would have been obvious to one with ordinary skill in the art at the time of invention to include the using the source address of the received frame as the destination address of the ACK frame for the purpose of acknowledging the received frame to the sending node. The motivation for acknowledging a received frame is to detect and correct frame loss or frame error by having the sending node retransmit based on the reception (or non-reception) of the ACK frame.

Regarding claim 12, Hershey, IEEE 802.11, and Tanabe disclose the method of claim 14. However, IEEE 802.11 and Tanabe lack what Hershey further discloses, "scanning a channel carrying the Eavesdrop Unicast frame by a plurality of devices including the destination device (figure 3B, element 35 where the transceiver is listening or scanning for the signal before it receives it, as for the plurality of devices scanning, it is well known in the art that mobile communication devices scan a communication

channel in order to know its state, such as busy or idle, the mobile communication devices may also scan the channel to know when it is their turn to communicate as is mentioned in col. 2, lines 63-65); receiving of the Eavesdrop Unicast frame by the destination device (figure 3B, element 35)". It would have been obvious to one with
5 ordinary skill in the art at the time of invention to include the scanning and receiving with the method of claim 14 for the same reasons and motivation as in claim 14.

Regarding claim 15, IEEE 802.11, Tanabe, and Hershey disclose the method of claim 14. However, IEEE 802.11 and Tanabe lack what Hershey discloses, "the
10 destination device is a wireless unit (figure 1A, any element mt is a wireless unit employing the method of figure 3A)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the wireless unit with the method of claim 14 for the same reasons and motivation as in claim 14.

15 Although claim 16 has been rejected under 35 U.S.C. 112 second paragraph for being vague and indefinite, the following art rejection applies to each scenario of claim 16 as described in the 35 U.S.C. 112 second paragraph rejection above.

Regarding claim 16, Hershey, IEEE 802.11, and Tanabe disclose the method of claim 12. However, Hershey and Tanabe lack what IEEE 802.11 further discloses, "the
20 Eavesdrop Unicast frame comprises the at least four address fields, the first address field including a first medium access control (MAC) address assigned to a group of wireless units (page 39, section 7.1.3.3.4 where a first address field indicates the group

of wireless units of Hershey through the group address) and the fourth address field including a plurality of bits set to a predetermined value (page 39, section 7.1.3.3.5, where the address is a plurality of bits set to a predetermined value)."

It would have been obvious to one with ordinary skill in the art to include the 802.11 standards for the cast frame for the purpose sending a packet to a plurality of destinations at once (IEEE, page 39, 7.1.3.3.2). The motivation being that sending the packet to a plurality of destinations all at once versus one destination at a time saves resources and time.

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Response to Arguments

Applicant's arguments, see REMARKS, Claim Objections, page 6, filed 24 June 2004, with respect to the objections to claims 5 and 12 have been fully considered and are persuasive. The objections of claims 5 and 12 have been withdrawn.

15

Applicant's arguments filed 24 June 2004 have been fully considered but they are not persuasive.

20

Regarding claims 1-4, 6-13, and 15-19 applicant argues that Hershey does not read on applicant's claimed invention. Specifically that Hershey does not disclose the limitation "receiving a data frame from the destination device in response to the destination device receiving a cast frame for acknowledgement of receipt of the cast frame" and that the data frame acknowledgement in applicant's claimed invention is not the same as the ACK frames of Hershey. The examiner respectfully disagrees.

Although applicant may have intended for the data frame to not be organized in the same manner as the ACK frame of Hershey, both frames perform the same function as described in the claim; i.e. "acknowledgment of receipt of the cast frame." What applicant chooses to call the frame is a matter of design choice. Further, it should be
5 noted that an ACK frame is a data frame in the broadest sense of the meaning. If applicant intends for the term "data frame" to have a specific meaning, it should be clearly defined in the specification and not conflict with other meanings of "data frame" as described in the specification. See MPEP § 2106.II.(c).

10 Applicant's arguments, see REMARKS, Rejections Under 35 U.S.C. 102, page 7, paragraph 2, filed 24 June 2004, with respect to the rejection(s) of claim 8 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art and a better understanding of applicant's
15 invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.


20 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10



Joshua Kading
Examiner
Art Unit 2661

December 1, 2004



BOB PHUNKULH
PRIMARY EXAMINER